SAMSUNG ***RF408/RF508/RF708/RF409/***
RF509/RF709/RC528/RC728

User Guide

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Chapter 1.

Getting Started

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Cautions Regarding OS Support

❶ Windows is neither installed nor supplied with this computer.

❷ Therefore, customers should purchase a Windows XP/Windows Vista/Windows 7 software license and install the software. Do not install an illegal copy or a copy that has already been installed on another PC.

❸ For the installation procedures and any issues with the operating systems or applications not supplied by Samsung Computer, contact the corresponding software company.

❹ The company will not provide a replacement or refund due to the reason ❷, ❸ and if our service engineer visits you due to this problem, a service charge will be applied.

! Charge the battery fully when using the computer for the first time.

Before You Start

Before reading the User Guide, first check the following information.

Safety Precaution Notations

Icon	Notation	Description
⚠	**Warning**	Failing to follow instructions marked with this symbol, may cause personal injury and or fatality.
⚠	**Caution**	Failing to follow instructions marked with this symbol, may cause slight injury to yourself or damage your property.

Text Notations

Icon	Notation	Description
💡	**Before You Start**	Content included in this section includes information required before using a function.
!	**Caution**	Content included in this section includes information required about the function.
✎	**Note**	Content included in this section includes helpful information to use the function.

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The information in this document is subject to change without notice due to improving the performance of the product.

Samsung Electronics shall not be liable for any data loss. Please take care to avoid losing any important data and backup your data to prevent any such data loss.

About the Product Capacity Representation Standard

About HDD Capacity Representation

The capacity of the storage device (HDD, SSD) of the manufacturer is calculated assuming that 1KB=1,000 Bytes.

However, the operating system (Windows) calculates the storage device capacity assuming that 1KB=1,024 Bytes, and therefore the capacity representation of the HDD in Windows is smaller than the actual capacity due to the difference in capacity calculation.

(E.g. For a 80GB HDD, Windows represents the capacity as 74.5GB, 80x1,000x1,000x1,000 byte/(1,024x1,024x1,024)byte = 74.505GB)

In addition, the capacity representation in Windows may be even smaller because some programs such as Recovery Solution may reside in a hidden area of the HDD.

About Memory Capacity Representation

The memory capacity reported in Windows is less than the actual capacity of memory.

This is because BIOS or a video adapter uses a portion of memory or claims it for further use.

(E.g. For 1GB(=1,024MB) memory installed, Windows may report the capacity as 1,022MB or less)

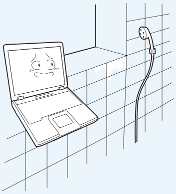
Safety Precautions

For your security and to prevent damage, please read the following safety instructions carefully.
Since this is commonly applied to Samsung Computers, some pictures may differ from actual products.

Warning

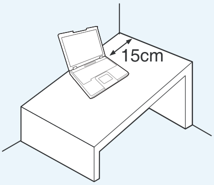
Failing to follow instructions marked with this symbol may cause personal injury and even fatality.

Installation Related



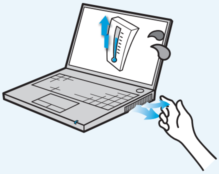
Do not install the product in places exposed to humidity such as a bathrooms.

There is a danger of electric shock. Use the product within the operating conditions specified in the Manufacturers User Guide.



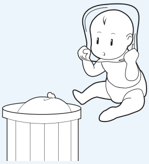
Keep a distance of 15cm or more between the computer and the wall and do not place any objects between them.

This may increase the internal temperature of the computer and may cause an injury.



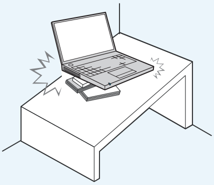
Avoid exposing any part of your body to the heat from the computer vent or AC adapter for a long time when the computer is on.

Exposing a part of your body close to the heat from the vent or AC adapter for long periods of time may cause a burn.



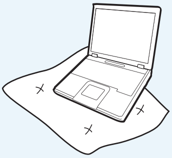
Keep the plastic bags out of the reach of children.

There is a danger of suffocation.



Do not install the computer on a slant or a place prone to vibrations, or avoid using the computer in that location for a long time.

This increases the risk that a malfunction or damage to the product will occur.



Avoid blocking the vent at the bottom or side of the computer when using it on a bed or cushion.

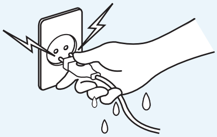
If the vent is blocked, there is a danger of damaging the computer or overheating the inside of the computer.

Warning

Failing to follow instructions marked with this symbol may cause personal injury and even fatality.

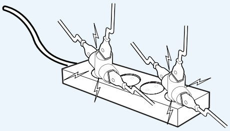
Power Related

The power plug and wall outlet figures may differ depending on the country specifications and the product model.



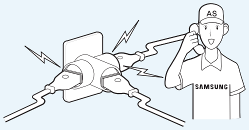
Do not touch the main plug or power cord with wet hands.

There is a danger of electric shock.



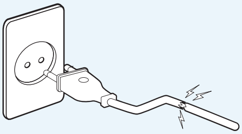
Do not exceed the standard capacity (voltage/current) of a multiplug or power outlet extension when using it for the product.

There is a danger of electric shock or fire hazard.



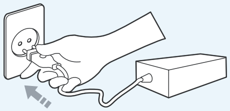
If the power cord or power outlet makes a noise, disconnect the power cord from the wall outlet and contact a service center.

There is a danger of electric shock or fire hazard.



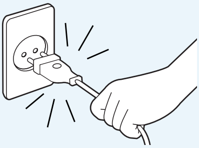
Do not use a damaged or loose main plug or power cord or power outlet.

There is a danger of electric shock or fire hazard.



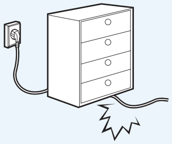
Plug the power cord firmly into the power outlet and AC adapter.

Failing to do so may cause fire hazard.



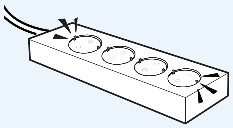
Do not unplug the power cord pulling the cable only.

If the cord is damaged, it may cause electric shock.



Do not bend the power cord excessively or do not place a heavy object over the power cord. It is especially important to keep the power cord out of reach of infants and pets.

If the cord is damaged, it may cause electric shock or fire.

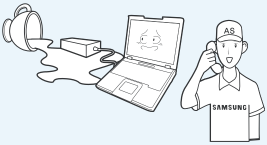


Connect the power cord to an outlet or multiple power plug (extended cable) with a ground terminal.

Failing to do so may result in electric shock.

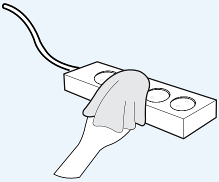
Warning

Failing to follow instructions marked with this symbol may cause personal injury and even fatality.



If water or another substance enters the power input jack, AC adapter or the computer, disconnect the power cord and contact the service center.

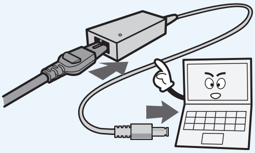
Damage to the device within the computer may cause electric shock or fire hazard.



Keep the power cord or outlet clean so that they are not covered with dust.

Failing to do so may result in fire.

AC Adapter Usage Precautions

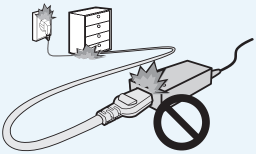


Connect the power cord to the AC adapter firmly.

Otherwise, there is a danger of fire due to an incomplete contact.

Use only the AC adapter supplied with the product.

Using another adapter may cause the screen to flicker.



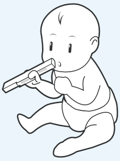
Do not place heavy objects or step onto the power cord or AC adapter to avoid damaging the power cord or AC adapter.

If the cord is damaged, there is a danger of electric shock or fire.

Warning

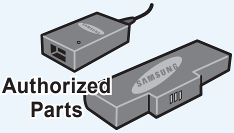
Failing to follow instructions marked with this symbol may cause personal injury and even fatality.

Battery Usage Related



Keep the battery out of the reach of infants and pets, as they could put the battery into their mouths.

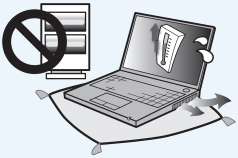
There is a danger of electric shock or choking.



Use an authorized battery and AC adapter only.

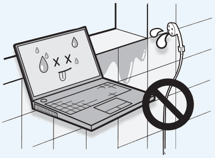
Please use an authorized battery and adapter approved by Samsung Electronics.

Unauthorized batteries and adapters may not meet the proper safety requirements and may cause problems or malfunctions and result in an explosion or fire.



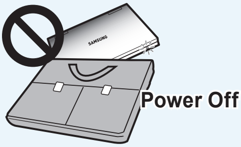
Do not use the computer in a badly ventilated location such as on bedding, on a pillow or cushion, etc, and do not use it in a location such as room with floor heating as it may cause the computer to overheat.

Take care that the computer vents (on the side or the bottom) are not blocked especially in these environments. If the vents are blocked, the computer may overheat and it may cause a computer problem, or even an explosion.



Do not use the computer in a humid location such as a bathroom or sauna.

Please use the computer within the recommended temperature and humidity range (10~32°C, 20~80% RH).

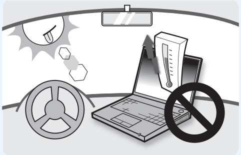


Do not close the LCD panel and put the computer into your bag to move it when it is still turned on.

If you put the computer into your bag without turning it off, the computer may overheat and there is a danger of fire. Shut the computer down properly before moving it.

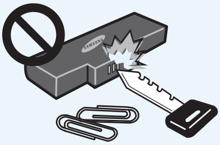
Warning

Failing to follow instructions marked with this symbol may cause personal injury and even fatality.



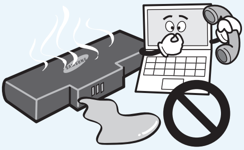
Never heat the product (or battery) or put the product (or battery) into a fire. Do not put or use the product (or battery) in a hot location such as a sauna, inside a vehicle exposed to the heat, and so on.

There is a danger of an explosion or fire.



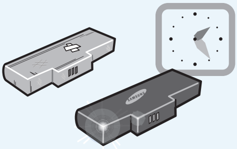
Take care not to allow metal objects such as a key or clip to touch the battery terminal (metal parts).

If a metal object touches the battery terminals, it may cause excessive current flow and it may damage the battery, or result in a fire.



If liquid leaks out of the product (or battery) or there is a funny smell coming from the product (or battery), remove the product (or battery) the computer and contact a service center.

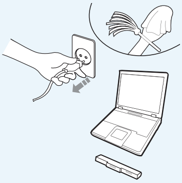
There is a danger of an explosion or fire.



To use the computer safely, replace a dead battery with a new, authorized battery.

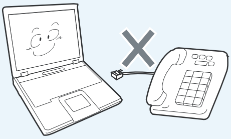
Please charge the battery fully before using the computer for the first time.

Usage Related



Disconnect all cables connected to the computer before cleaning it. If your notebook is external & removable battery type, remove the external battery.

There is a danger of electric shock or damage to the product.

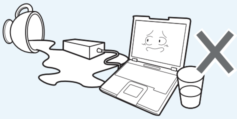


Do not connect a phone line connected to a digital phone to the modem.

There is a danger of a electric shock, fire or damage to the product.

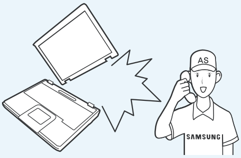
Warning

Failing to follow instructions marked with this symbol may cause personal injury and even fatality.



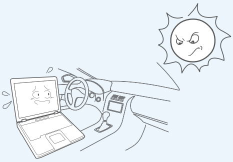
Do not place any container filled with water or chemicals over or near the computer.

If water or chemicals enter the computer, this may cause fire or electric shock.



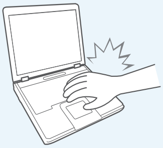
If the computer is broken or dropped, disconnect the power cord and contact a service center for a safety check.

Using a broken computer may cause electric shock or fire hazard.



Avoid direct sunlight when the computer is in an air-tight location such as inside a vehicle.

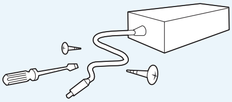
There is a danger of a fire hazard. The computer may overheat and also present opportunity to thieves.



Do not use your notebook PC for long periods of time while a part of your body is making direct contact with it. The temperature of the product may increase during normal operation.

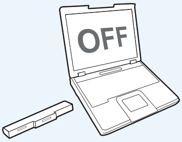
This may result in harming or burning your skin.

Upgrade Related



Never disassemble the power supply or AC adapter.

There is a danger of electric shock.

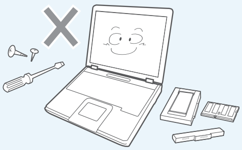


When removing the RTC (Real Time Clock) battery, keep it out of the reach of children as they could touch and/or swallow it.

There is a danger of choking. If a child has swallowed it, contact a doctor immediately.

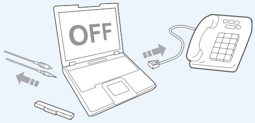
Warning

Failing to follow instructions marked with this symbol may cause personal injury and even fatality.



Use only authorized parts (multi-plug, battery and memory) and never disassemble parts.

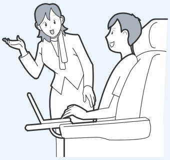
There is a danger of damaging the product, electric shock or fire hazard.



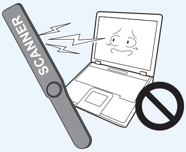
Shut down the computer and disconnect all cables before disassembling the computer. If there is a modem, disconnect the phone line. If you are disassembling notebook computer, make sure to remove the battery.

Failing to do so, may cause electric shock.

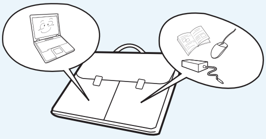
Security and Movement Related



Follow the instructions for the relevant location (e.g. airplane, hospital, etc.) when using a wireless communication device (wireless LAN, Bluetooth, etc.).



Avoid exposing a drive to magnetic fields. Security devices with magnetic fields include airport walk-through devices and security wands. The airport security devices that check carry-on luggage, such as conveyor belts, use x-rays instead of magnetism and will not damage a drive.



When carrying the notebook computer with other items, such as the adapter, mouse, books etc, take care not to press anything against the notebook computer.

If a heavy object is pressed against the notebook computer, a white spot or stain may appear on the LCD. Therefore, take care not to apply any pressure to the notebook.

In this case, place the notebook computer in a separate compartment away from the other objects.

⚠ Caution

Failing to follow instructions marked with this symbol may cause slight injury or damage to the product.

Installation Related

Do not block the ports (holes), vents, etc. of the product and do not insert objects.

Damage to a component within the computer may cause electric shock or fire.

When using the computer with it lying on its side, place it so that the vents face upwards.

Failing to do so, may cause the internal temperature of the computer to rise and the computer to malfunction or halt.

Do not place a heavy object over the product.

This may cause a problem with the computer. In addition, the object may fall and cause injury, or damage the computer.

Battery Usage Related

Dispose of worn-out batteries properly.

- There is a danger of fire or explosion.
- The battery disposal method may differ depending on your country and region. Dispose of the used battery in an appropriate way.

Do not throw or disassemble the battery and do not put it into water.

This may cause an injury, fire or explosion.

Use only a battery authorized by Samsung Electronics.

Failing to do so may cause an explosion.

Avoid contact with metal objects such as car keys or clips when keeping or carrying a battery.

Contact with a metal may cause excessive current and a high temperature and may damage the battery or cause a fire.

Charge the battery according to the instructions in the manual.

Failing to do so, may cause an explosion or fire from damage to the product.

Do not heat the product (or battery) or expose it to heat (e.g. inside a vehicle during the summer).

There is a danger of explosion or fire.

⚠ Caution

Failing to follow instructions marked with this symbol may cause slight injury or damage to the product.

Usage Related

Do not place a candle, light cigar, etc. over or on the product.

There is a danger of fire.

Use a wall outlet or multi-plug with a grounding part.

Failing to do so may cause electric shock hazard.

Make sure to have the product tested by a safety service engineer after repairing the product.

Authorized Samsung Repair Centers will carry out safety checks after a repair. Using a repaired product without testing it for safety may cause an electric shock or fire.

In case of lightning, immediately turn the system off, disconnect the power cord from the wall outlet and phone line from modem. Do not use a modem or phone.

There is a danger of electric shock or fire.

Do not use your computer and AC-Adapter on your lap or soft surfaces.

If the computer temperature increases, there is a danger of burning yourself.

Connect only permitted devices to the connectors or ports of the computer.

Failing to do so, may cause electric shock and fire.

Close the LCD panel only after checking if the notebook computer is turned off.

The temperature may rise and it may cause overheating and deformation of the product.

Do not press the Eject Button while the Floppy Disk/CD-ROM drive is in operation.

You might lose data and the disk might be suddenly ejected and could cause an injury.

Take care not to drop the product while using it.

This may cause personal injury or loss of data.

Do not touch the antenna with electricity facility such as the power outlet.

There is a danger of electric shock.

When handling computer parts, follow the instructions on the manual supplied with the parts.

Failing to do so, may cause damage to the product.

If the computer emits smoke, or there is a burning smell, disconnect the power plug from the wall outlet and contact a service center. If your computer is a notebook computer, make sure to remove the battery.

There is a danger of fire.

Do not use a damaged or modified CD/Floppy Disk.

There is a danger of damaging the product or personal injury.

Do not insert your fingers into the PC Card Slot.

There is a danger of injury or electric shock.

Caution

Failing to follow instructions marked with this symbol may cause slight injury or damage to the product.

Use recommended computer cleansing solution when cleaning the product and only use the computer when it is completely dried.

Failing to do so may cause electric shock or fire.

Emergency disk eject method using paperclip should not be used while the disk is in motion. Make sure to use the emergency disk eject method only when the Optical Disk Drive has stopped.

There is a danger of injury.

Do not place your face close to the Optical Disk Drive tray when it is operating.

There is a danger of injury due to an abrupt ejection.

Check CDs for cracks and damage prior to use.

It may damage the disc and cause disorder of device and injury of user.

Upgrade Related

Take care when touching the product or parts.

The device may be damaged or you may be injured.

Take care not to throw or drop a computer part or device.

This may cause injury or damage to the product.

Make sure to close the computer cover before connecting the power after a reassembly.

There is a danger of electric shock if your body touches an internal part.

Use parts authorized by Samsung Electronics only.

Failing to do so, may cause fire or damage the product.

Never disassemble or repair the product by yourself.

There is a danger of electric shock or fire.

To connect a device that is not manufactured or authorized by Samsung Electronics, enquire at your service center before connecting the device.

There is a danger of damaging the product.

Caution

Failing to follow instructions marked with this symbol may cause slight injury or damage to the product.

Security and Movement Related

When moving the product, turn the power off and separate all connected cables first.

The product might be damaged or users may trip over the cables.

For long periods of not using the notebook computer, discharge the battery and preserve as it is detached. (For external & removable battery type)

The battery will be preserved at its best condition.

Do not operate or watch the computer while driving a vehicle.

There is a danger of a traffic accident. Please concentrate on driving.

Cautions on Preventing Data Loss (Hard Disk Management)

Take care not to damage the data on a hard disk drive.

- A hard disk drive is so sensitive to external impact that an external impact may cause loss of data on the surface of the disk.
- Take extra care, because moving the computer or an impact on the computer when it is turned on may damage the data of the hard disk drive.
- The company is not liable for any loss of any data caused by a customer's careless usage or bad environmental conditions.

Causes that may damage the data of a hard disk drive and the hard disk drive itself.

- The data may be lost when an external impact is applied to the disk while disassembling or assembling the computer.
- The data may be lost when the computer is turned off or reset by a power failure while the hard disk drive is operating.
- The data may be lost and irrecoverable due to a computer virus infection.
- The data may be lost if the power is turned off while running a program.
- Moving or causing an impact to the computer while the hard disk drive is operating, may cause files to be corrupted or bad sectors on the hard disk.

To prevent data loss due to damage to the hard disk drive, please backup your data frequently.

Caution

Failing to follow instructions marked with this symbol may cause slight injury or damage to the product.

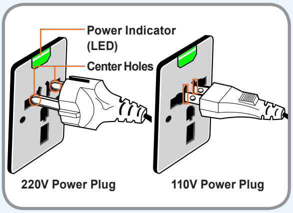
Using the power supply in an airplane

Since the power outlet type differs depending on the type of airplane, connect the power appropriately.

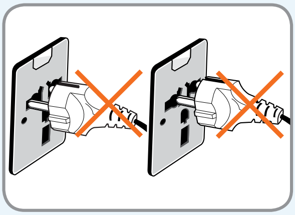
When using the AC power plug

Connect the power plug pins perpendicular into the center of the power outlet.

- If the plug pins are not inserted into the center of the holes, the plug pins are only inserted up to half their length. In this case, reconnect the power plug.
- You have to insert the power plug into the outlet when the power indicator (LED) of the power outlet is lit green. If the power is connected properly, the power indicator (LED) remains green.
  Otherwise, the power indicator (LED) is turned off. In this case, unplug the power, check if the power indicator (LED) is green, and then reconnect the power plug.



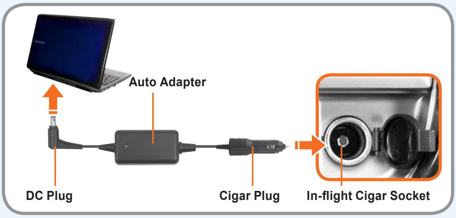
Good Example ○



Wrong Example ×

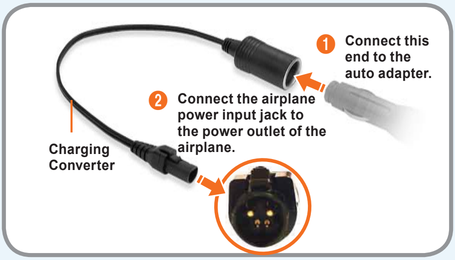
When using the auto adapter

When the cigar socket is provided, you have to use the auto adapter (optional). Insert the cigar plug of the auto adapter into the cigar socket and connect the DC plug of the auto adapter to the power input port of the computer.



When using the Airplane Charging Converter

Depending on the airplane, you have to use the auto adapter and charging converter. Connect the airplane charging converter (optional) to the auto adapter (optional) and then insert the airplane power input jack into the power outlet.



① Connect this end to the auto adapter.

② Connect the airplane power input jack to the power outlet of the airplane.

Proper Posture During Computer Use

Maintaining a proper posture during computer use is very important to prevent physical harm.

The following instructions are about maintaining a proper posture during computer use developed through human engineering. Please read and follow them carefully when using the computer.

Otherwise, the probability of (RSI: Repetitive Strain Injury) from repeated operations may increase and serious physical harm may be caused.

- The instructions in this manual have been prepared so that they can be applied within the coverage of general users.
- If the user is not included in the coverage, the recommendation is to be applied according to the user's needs.

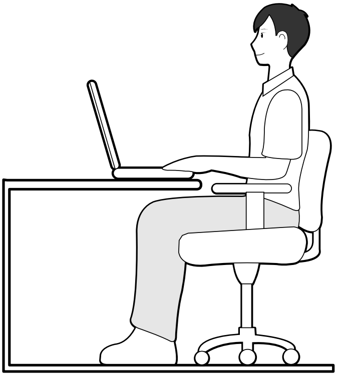
Proper Posture

Adjust the heights of desks and chairs appropriate to your height.

The heights are to be adjusted so that your arm forms a right angle when you place your hand over the keyboard while sitting down on a chair.

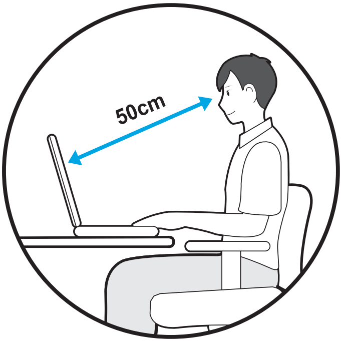
Adjust the height of chair so that your heel is comfortably placed on the floor.

- Do not use the computer while you are lying down, but only while you are sitting down.
- Do not use the computer on your lap.
  If the computer temperature increases, there is a danger of burning yourself.
- Work while keeping your waist straight.
- Use a chair with a comfortable back.
- Keep the center of your leg weight not on the chair but on your feet when you are sitting on a chair.
- To use the computer while talking over the telephone, use a headset. Using the computer with the phone on your shoulder is bad for posture.
- Keep frequently used items within a comfortable work range (where you can reach them with your hands).



Eye Position

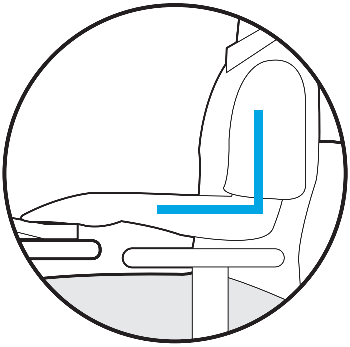
Keep the monitor or LCD away from your eyes by at least 50cm.



- Adjust the height of the monitor and the LCD screen so that its top height is equal to or lower than your eyes.
- Avoid setting the monitor and LCD excessively bright.
- Keep the monitor and LCD screen clean.
- If you wear glasses, clean them before using the computer.
- When entering contents printed on a paper into the computer, use a static paper holder so that the height of the paper is almost equal to that of the monitor.

Hand Position

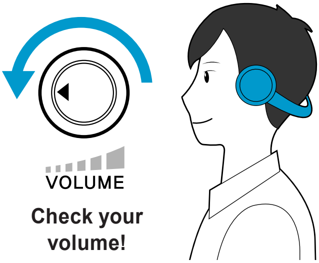
Keep your arm at a right angle as shown by the figure.



- Keep the line from your elbow to your hand straight.
- Do not place your palm over the keyboard while typing.
- Do not hold the mouse with excessive force.
- Do not press the keyboard, touchpad or mouse with excessive force.
- It is recommended connecting an external keyboard and mouse when using the computer for long periods of time.

Volume Control (Headphones and Speakers)

Check your volume first to listen to music.



- Check if the volume is too loud before using headphones.
- It is not recommended using headphones for long periods of time.
- Any deviation from the equalizer default setting could cause hearing impairment.
- The default setting can be changed through software and driver updates without your intervention. Please check the equalizer default setting before first usage.

Use Time (Break Time)

- Take a break for 10 minutes or more after a 50-minute period when working for more than one hour.

Illumination

- Do not use the computer in dark locations. The illumination level for computer use must be as bright so for reading a book.
- Indirect illumination is recommended. Use a curtain to prevent reflection on the LCD screen.

Operation Condition

- Do not use the computer in hot and humid locations.
- Use the computer within the allowed temperature and humidity range specified in the User Guide.

Important Safety Information

Safety Instructions

Your system is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that the safety instructions marked on the product and in the documentation are followed.

Always follow these instructions to help guard against personal injury and damage to your system.

Setting Up your System

- Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.
- Do not use this product near water or a heat source such as a radiator.
- Set up the system on a stable work surface.
- The product should be operated only with the type of power source indicated on the rating label.
- Ensure that the electrical outlet you are using to power your equipment is easily accessible in case of fire or short circuit.
- If your computer has a voltage selector switch, make sure that the switch is in the proper position for your area.
- Openings in the computer case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space, at least 6 inches (15 cm), around the system for ventilation when you set up your work area. Never insert objects of any kind into the computer ventilation openings.
- Ensure that the fan vents on the bottom of the casing are clear at all times. Do not place the computer on a soft surface, doing so will block the bottom vents.
- If you use an extension cord with this system, make sure that the total power rating on the products plugged into the extension cord does not exceed the extension cord power rating.
- For Notebooks with glossy display bezels the user should consider the placement of the Notebook as the bezel may cause disturbing reflections from surrounding light and bright surfaces.

Care During Use

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill anything on the system. The best way to avoid spills is to not eat or drink near your system.
- Some products have a replaceable CMOS battery on the system board. There is a danger of explosion if the CMOS battery is replaced incorrectly. Replace the battery with the same or equivalent type recommended by the manufacturer.
  Dispose of batteries according to the manufacturers instructions. If the CMOS battery requires replacement insure that a qualified technician performs the task.
- When the computer is turned off, a small amount of electrical current still flows through the computer.
  To avoid electrical shock, always unplug all power cables, remove the battery and modem cables from the wall outlets before cleaning the system.
- Unplug the system from the wall outlet and refer servicing to qualified personnel if:
  – The power cord or plug is damaged.
  – Liquid has been spilled into the system.
  – The system does not operate properly when the operating instructions are followed.
  – The system was dropped or the casing is damaged.
  – The system performance changes.

The Instruction On Safety Operation of NotePC

❶ When installing and operating devices please refer to safety requirements in the user guide.

❷ Devices can be used only with the equipment specified in the technical specifications of the devices.

❸ If any smell of burning or smoke is detected from the computer the unit should be switched off and battery removed. The unit should be checked by a qualified technician before reuse.

❹ Service and repair of devices should be carried out by authorized service centers.

❺ Do not allow your portable computer to operate with the base resting directly on exposed skin for extended periods of time. The surface temperature of the base will rise during normal operation (particularly when AC Power is present). Allowing sustained contact with exposed skin can cause discomfort or eventually a burn.

Replacement Parts and Accessories

Use only replacement parts and accessories recommended by manufacturer.

To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.

Do not use this product in areas classified as hazardous. Such areas include patient care areas of medical and dental facilities, oxygen rich environments, or industrial areas.

Battery Disposal

Do not put rechargeable batteries or products powered by non-removable rechargeable batteries in the garbage.

Contact the Samsung Helpline for information on how to dispose of batteries that you cannot use or recharge any longer.

Follow all local regulations when disposing of old batteries.

THERE IS A RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Laser Safety

All systems equipped with CD or DVD drives comply with the appropriate safety standards, including IEC 60825-1. The laser devices in these components are classified as “Class 1 Laser Products” under a US Department of Health and Human Services (DHHS) Radiation Performance Standard. Should the unit ever need servicing, contact an authorized service location.

- **Laser Safety Note:**

  Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure. To prevent exposure to laser beams, do not try to open the enclosure of a CD or DVD drive.
- Class 1M laser radiation when operating part is open.

  Do not view directly with optical instruments.
- Class 3B invisible laser radiation when open.

  Avoid exposure to the beam.

Connecting and Disconnecting the AC adapter

The socket-outlet should be installed near the equipment and should be easily accessible.

Do not unplug the power cord by only pulling the cable.

Power Cord Requirements

The power cord set (wall plug, cable and AC adapter plug) you received with your computer meets the requirements for use in the country where you purchased your equipment.

Power cord sets for use in other countries must meet the requirements of the country where you use the computer. For more information on power cord set requirements, contact your authorized dealer, reseller, or service provider.

General Requirements

The requirements listed below are applicable to all countries:

- All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord set will be used.
- The power cord set must have a minimum current capacity of 7 A and a nominal voltage rating of 125 or 250 volts AC, as required by each country’s power system. (USA ONLY)
- The appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C7 (or C5) connector, for mating with appliance inlet on the computer.

Regulatory Compliance Statements

Wireless Guidance

(If fitted with 2.4G band or 5G band)

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4GHz/5GHz Band, may be present (embedded) in your notebook system. The following section is a general overview of considerations while operating a wireless device.

Additional limitations, cautions, and concerns for specific countries are listed in the specific country sections (or country group sections). The wireless devices in your system are only qualified for use in the countries identified by the Radio Approval Marks on the system rating label. If the country you will be using the wireless device in, is not listed, please contact your local Radio Approval agency for requirements. Wireless devices are closely regulated and use may not be allowed.

The RF field strength of the wireless device or devices that may be embedded in your notebook are well below all international RF exposure limits as known at this time. Because the wireless devices (which may be embedded into your notebook) emit less energy than is allowed in radio frequency safety standards and recommendations, manufacturer believes these devices are safe for use. Regardless of the power levels, care should be taken to minimize human contact during normal operation.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on and transmitting.

Some circumstances require restrictions on wireless devices. Examples of common restrictions are listed on the next page:

- Radio frequency wireless communication can interfere with equipment on commercial aircraft. Current aviation regulations require wireless devices to be turned off while traveling in an airplane.
  802.11ABGN (also known as wireless Ethernet or Wifi) and Bluetooth communication devices are examples of devices that provide wireless communication.
- In environments where the risk of interference to other devices or services is harmful or perceived as harmful, the option to use a wireless device may be restricted or eliminated. Airports, Hospitals, and Oxygen or flammable gas laden atmospheres are limited examples where use of wireless devices may be restricted or eliminated. When in environments where you are uncertain of the sanction to use wireless devices, ask the applicable authority for authorization prior to use or turning on the wireless device.
- Every country has different restrictions on the use of wireless devices. Since your system is equipped with a wireless device, when traveling between countries with your system, check with the local Radio Approval authorities prior to any move or trip for any restrictions on the use of a wireless device in the destination country.
- If your system came equipped with an internal embedded wireless device, do not operate the wireless device unless all covers and shields are in place and the system is fully assembled.
- Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Please contact manufacturer for service.
- Only use drivers approved for the country in which the device will be used. See the manufacturer System Restoration Kit, or contact manufacturer Technical Support for additional information.

United States of America

USA and Canada Safety Requirements and Notices

Do not touch or move antenna while the unit is transmitting or receiving.

Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.

Do not operate the radio or attempt to transmit data unless the antenna is connected; if not, the radio may be damaged.

Use in specific environments:

The use of wireless devices in hazardous locations is limited by the constraints posed by the safety directors of such environments.

The use of wireless devices on airplanes is governed by the Federal Aviation Administration (FAA).

The use of wireless devices in hospitals is restricted to the limits set forth by each hospital.

Explosive Device Proximity Warning

Do not operate a portable transmitter (such as a wireless network device) near unshielded blasting caps or in an explosive environment unless the device has been modified to be qualified for such use.

Use On Aircraft Caution

Regulations of the FCC and FAA prohibit airborne operation of radio-frequency wireless devices because their signals could interfere with critical aircraft instruments.

Other Wireless Devices

Safety Notices for Other Devices in the Wireless Network: Refer to the documentation supplied with wireless Ethernet adapters or other devices in the wireless network.

The Part 15 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modification to said product not expressly approved by Intel could void the user’s authority to operate this device.

Unintentional Emitter per FCC Part 15

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet helpful: “Something About Interference.”

This is available at FCC local regional offices. Our company is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by our company. The correction will be the responsibility of the user. Use only shielded data cables with this system.

Intentional emitter per FCC Part 15

(If fitted with 2.4G band or 5G band)

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4GHz/5GHz Band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the United States of America if an FCC ID number is on the system label.

This device is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range. FCC requires this product to be used indoors for the frequency range 5.15 to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems. High power radars are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and /or damage this device.

The FCC has set a general guideline of 20 cm (8 inches) separation between the device and the body, for use of a wireless device near the body (this does not include extremities). This device should be used more than 20 cm (8 inches) from the body when wireless devices are on. The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by the FCC.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter except the installed Bluetooth transmitter.

Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

Wireless devices are not user serviceable. Do not modify them in any way.

Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.

FCC Statement for Wireless LAN use:

“While installing and operating this transmitter and antenna combination the radio frequency exposure limit of 1mW/cm2 may be exceeded at distances close to the antenna installed. Therefore, the user must maintain a minimum distance of 20cm from the antenna at all times.

This device can not be colocated with another transmitter and transmitting antenna.”

FCC Part 68 (If fitted with a modem device.)

This equipment compiles with part of the FCC rules. On the back of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

This equipment uses the following USOC jacks : RJ11C

An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or promises wiring using a compatible modular jack which is Part 68 compliant. See Installation Instructions for details.

The REN is used to determine the quantity of devices which may be connected to telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by total RENs, contact the local telephone company to determine the maximum REN for the calling area.

If the terminal equipment causes harm to the telephone network, the Telephone Company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advanced notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment (Modem) for repair or warranty information, please contact your local distributor. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

The user must use the accessories and cables supplied by the manufacturer to get optimum performance from the product.

No repairs may be done by the customer.

This equipment cannot be used on public coin phone service provided by the telephone company. Connection to party line service is subject to state tariffs.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be any number for which charges exceed local or long-distance transmission charges.)

In order to program this information into your fax machine, refer to your communications software user manual.

Canada

Unintentional Emitter per ICES-003

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limitesapplicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

Intentional Emitter per RSS 210

(If fitted with 2.4G band or 5G band)

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4GHz/5GHz Band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in Canada if an Industry Canada ID number is on the system label.

When using IEEE 802.11a wireless LAN, this product is restricted to indoor use due to its operation in the 5.15- to 5.25-GHz frequency range. Industry Canada requires this product to be used indoors for the frequency range of 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel mobile satellite systems. High power radar is allocated as the primary user of the 5.25- to 5.35-GHz and 5.65 to 5.85-GHz bands. These radar stations can cause interference with and/or damage to this device.

The maximum allowed antenna gain for use with this device is 6dBi in order to comply with the E.I.R.P limit for the 5.25- to 5.35 and 5.725 to 5.85 GHz frequency range in point-to-point operation.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on.

The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by Industry Canada.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter except the installed Bluetooth transmitter.

Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

To prevent radio interference to licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.

Telecommunications per DOC notice (for products fitted with an IC-compliant modem)

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operation, and safety requirements. The Department does not guarantee the equipment will operate to the users' satisfaction.

Before installing this equipment, users should make sure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the inside wiring associated with a single-line individual service may be extended by means of a certified connector assembly. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should make sure, for their own protection, that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

To avoid electrical shock or equipment malfunction do not attempt to make electrical ground connections by yourself. Contact the appropriate inspection authority or an electrician, as appropriate.

The **Ringer Equivalence Number** (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

Brazil

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

European Union

European Union CE Marking and Compliance Notices

Products intended for sale within the European Union are marked with the Conformité Européene (CE) Marking, which indicates compliance with the applicable Directives and European standards and amendments identified below. This equipment also carries the Class 2 identifier.

The following information is only applicable to systems labeled with the CE mark CE.

European Directives CE

This Information Technology Equipment has been tested and found to comply with the following European directives:

- EMC Directive 2004/108/EC
- Low Voltage Directive 2006/95/EC
- R&TTE Directive 1999/5/EC

Manufacturer Information

Samsung Electronics Co., Ltd.

416, Maetan-3Dong, Yeongtong-Gu, Suwon-City, Gyeonggi-Do, 443-742, Korea

Samsung Electronics Suzhou Computer Co., Ltd.

No. 198, Fangzhou Road, Suzhou Industrial Park, Jiangsu Province, 215021, China

Tel:+86-512-6253-8988

For the web or the phone number of Samsung Service Centre, see the Warranty or contact the retailer where you purchased your product.

European Radio Approval Information (for products fitted with EU-approved radio devices)

This Product is a Notebook computer; low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4GHz/5GHz band, may be present (embedded) in your notebook system which is intended for home or office use. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

CE (!)

Wireless devices that may be in your system are only qualified for use in the European Union or associated areas if a CE mark CE with a Notified Body Registration Number and the Alert Symbol is on the system label.

The power output of the wireless device or devices that may be embedded in you notebook is well below the RF exposure limits as set by the European Commission through the R&TTE directive.

The low band 5.15 - 5.35 GHz is for indoor use only.

> ! See 802.11b and 802.11g restrictions for specific countries or regions within countries under the heading “European Economic Area Restrictions” below.

EU R&TTE Compliance Statements

cs	**Česky [Czech]**	Samsung tímto prohlašuje, že tento Notebook PC je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
da	**Dansk [Danish]**	Undertegnede Samsung erklærer herved, at følgende udstyr Notebook PC overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
de	**Deutsch [German]**	Hiermit erklärt Samsung, dass sich das Gerät Notebook PC in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
et	**Eesti [Estonian]**	Käesolevaga kinnitab Samsung seadme Notebook PC vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
en	**English**	Hereby, Samsung, declares that this Notebook PC is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
es	**Español [Spanish]**	Por medio de la presente Samsung declara que el Notebook PC cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
el	**Ελληνική [Greek]**	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Samsung ΔΗΛΩΝΕΙ ΟΤΙ Notebook PC ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
fr	**Français [French]**	Par la présente Samsung déclare que l’appareil Notebook PC est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
it	**Italiano [Italian]**	Con la presente Samsung dichiara che questo Notebook PC è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
lv	**Latviski [Latvian]**	Ar šo Samsung deklarē, ka Notebook PC atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
lt	**Lietuvių [Lithuanian]**	Šiuo Samsung deklaruoja, kad šis Notebook PC atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
nl	**Nederlands [Dutch]**	Hierbij verklaart Samsung dat het toestel Notebook PC in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.

mt	**Malti [Maltese]**	Hawnhekk, Samsung, jiddikjara li dan Notebook PC jikkonforma mal-ħtiāijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
hu	**Magyar [Hungarian]**	Alulírott, Samsung nyilatkozom, hogy a Notebook PC megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
pl	**Polski [Polish]**	Niniejszym Samsung oświadcza, Ŝe Notebook PC jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
pt	**Português [Portuguese]**	Samsung declara que este Notebook PC está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
sl	**Slovensko [Slovenian]**	Samsung izjavlja, da je ta Notebook PC v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
sk	**Slovensky [Slovak]**	Samsung týmto vyhlasuje, že Notebook PC spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
fi	**Suomi [Finnish]**	Samsung vakuuttaa täten että Notebook PC tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
sv	**Svenska [Swedish]**	Härmed intygar Samsung att denna Notebook PC står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
	Íslenska [Icelandic]	Hér með lýsir Samsung yfir því að Notebook PC er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
no	**Norsk [Norwegian]**	Samsung erklærer herved at utstyret Notebook PC er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.
	Türkiye [Türkçe]	Bu belge ile, Samsung bu Notebook PC’nin 1999/5/EC Yönetmeliğinin temel gerekliliklerine ve ilgili hükümlerine uygun olduğunu beyan eder.

To view the EU Declaration of Conformity for this product (in English only), go to: http://www.samsung.com/uk/support/download/supportDownMain.do then search the model number of the product.

If the Declaration of Conformity for the model you are interested in is not available on our web-site, please contact your distributor.

European Economic Area Restrictions

Local Restriction of 802.11b/802.11g Radio Usage

[Note to integrator: The following statements on local restrictions must be published in all end-user documentation provided with the system or product incorporating the wireless product.]

> ! Due to the fact that the frequencies used by 802.11b/802.11g wireless LAN devices may not yet be harmonized in all countries, 802.11b/802.11g products are designed for use only in specific countries or regions, and are not allowed to be operated in countries or regions other than those of designated use.
>
> As a user of these products, you are responsible for ensuring that the products are used only in the countries or regions for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country or region of use. Any deviation from permissible settings and restrictions in the country or region of use could be an infringement of local law and may be punished as such.

The European variant is intended for use throughout the European Economic Area. However, authorization for use is further restricted in particular countries or regions within countries, as follows:

General

European standards dictate maximum radiated transmit power of 100 mW effective isotropic radiated power (EIRP) and the frequency range 2400 – 2483.5 MHz.

The low band 5.15 - 5.35 GHz is for indoor use only.

Belgium

The product may be used outdoors, but for outdoor transmissions over a distance of 300m or more, a license from the BIPT is required.

This restriction should be indicated in the manual as follows:

Dans le cas d’une utilisation privée, à l’extérieur d’un bâtiment, au-dessus d’un espace public, aucun enregistrement n’est nécessaire pour une distance de moins de 300m. Pour une distance supérieure à 300m un enregistrement auprès de l’IBPT est requise. Pour une utilisation publique à l’extérieur de bâtiments, une licence de l’IBPT est requise. Pour les enregistrements et licences, veuillez contacter l’IBPT.

France

For Metropolitan departments:

2.400 - 2.4835 GHz for indoor use.

2.400 - 2.454 GHz (channels 1 to 7) for outdoor use.

For Guadeloupe, Martinique, St Pierre et Miquelon, Mayotte:

2.400 - 2.4835 GHz for indoor and outdoor use.

For Reunion, Guyane:

2.400 - 2.4835 GHz for indoor use.

2.420 - 2.4835 GHz for outdoor use (channels 5 to 13)

The low band 5.15 - 5.35 GHz is for indoor use only.

European Telecommunication Information (for products fitted with EU-approved modems)

Marking by the symbol CE indicates compliance of this equipment to the Radio and Telecom Terminal Equipment Directive 1999/5/EC. Such marking is indicative that this equipment meets or exceeds the following technical standards:

CTR 21 - Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE (excluding TE supporting voice telephony services) in which network addressing, if provided, is by means of Dual Tone Multi-Frequency (DTMF) signaling.

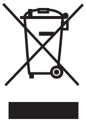
Although this equipment can use either loop disconnect (pulse) or DTMF (tone) signaling, only the performance of the DTMF signaling is subject to regulatory requirements for correct operation.

It is therefore strongly recommended that the equipment is set to use DTMF signaling for access to public or private emergency services. DTMF signaling also provides faster call setup.

This equipment has been approved to Council Decision 98/482/EEC - “CTR 21” for Pan-European single terminal connection to the Public Switched Telephone Network (PSTN).

However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN termination point. In the event of problems, you should contact manufacturer Technical Support.

WEEE Symbol Information



Correct disposal of this product

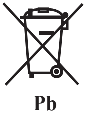
(Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems.)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.



Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

USA ONLY

This Perchlorate warning applies only to primary CR (Maganese Dioxide) Lithium coin cells in the product sold or distributed ONLY in California USA.

“Perchlorate Material- special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate.”

Dispose unwanted electronics through an approved recycler.

To find the nearest recycling location, go to our website:www.samsung.com/recyclingdirect Or call, (877) 278-0799

Basic Items

The items included in the package may vary depending on your selection of the optional items. Some items may be replaced with similar products and the color of some items may differ from that in this document.

Computer

Standard Battery

AC Adapter

Power Cable

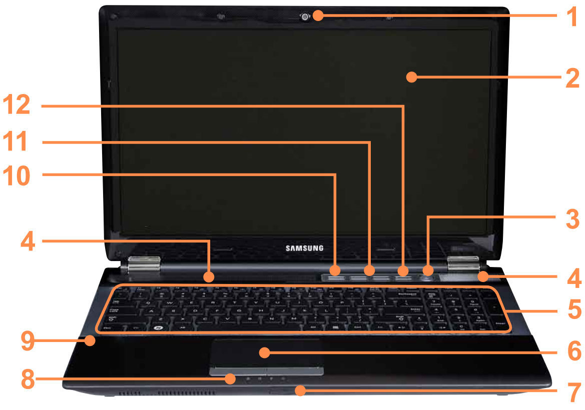
Charge the battery fully when using the computer for the first time.

Overview

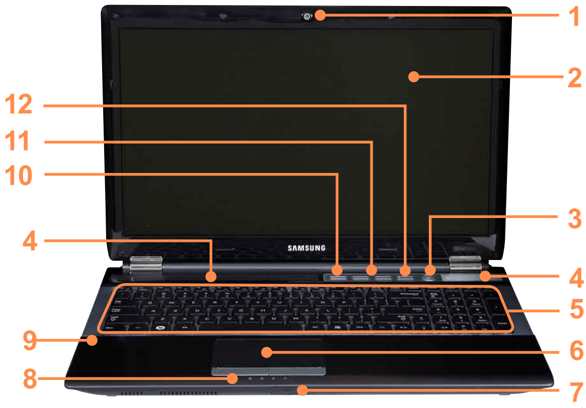
Before You Start!

- Optional items may be changed or may not be provided depending on the computer model.
- The actual color and appearance of the computer may differ from the pictures used in this guide.

Front View

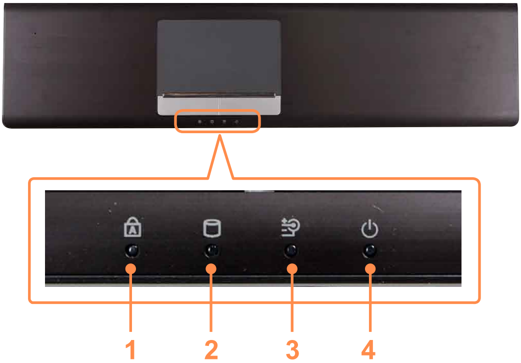


1	**Camera (Optional)**	Using this camera, you can take still pictures and record video.
2	**LCD**	The screen images are displayed here.
3	**Power Button ⏻/I**	Turns the computer on and off.
4	**Speaker**	A device used to generate sound.
5	**Keyboard**	A device to enter data by pressing the keys.
6	**Touchpad/Touchpad Buttons**	The touchpad and touchpad buttons provide functions similar to the mouse ball and buttons.
7	**Multi Card Slot (Optional)** SD	A card slot that supports SD Card, SDHC, MMC cards and SDXC cards.
8	**Status Indicators**	Shows the operating status of the computer. The corresponding operating LED is lit when the corresponding function operates.



9	**Microphone 🎤 (Optional)**	You can use the built-in microphone.
10	**Mute Button 🔇 (Optional)**	Press this button mute the sound or cancel the mute.
11	**Vol Up, Vol Down Buttons 🔈+, 🔈– (Optional)**	Press these buttons to control the volume.
12	**Wireless Button (Optional)**	Easily turns on or off the several wireless network settings at the same time. - This button is useful on the airplane to turn off every wireless network device. - You also can set up a specific wireless network device with the Fn + F9 key combination. **On** ●: Shows that any wireless network devices are turned on. **Off** ○: Shows that no wireless network device is turned on. Initializing process will take about 5 seconds after pressing this button. If you want to change the status again, press this button after 5 seconds. If the device cannot search wireless network while this button shows On, press the Fn + F9 key combination to search and configure it manually. If you installed **Easy Display Manager** after installing Windows XP/Windows Vista/ Windows 7, you can use this function.

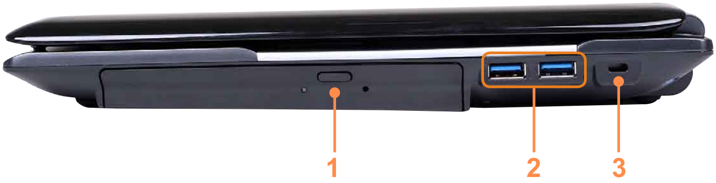
Status Indicators



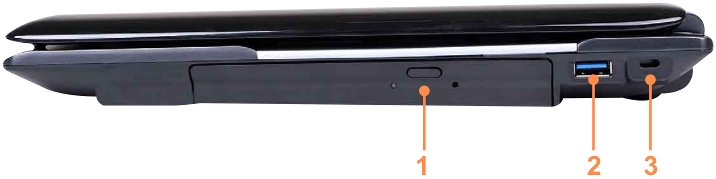
1	**Caps Lock**	This turns on when the Caps Lock key is pressed allowing capital letters to be typed without holding the Shift button down.
2	**HDD/ODD**	This tuns on when the hard disk or ODD is being accessed.
3	**Charge Status**	This shows the power source and the battery charge status. **Green:** When the battery is fully charged or the battery is not installed. **Amber:** When the battery is being charged. **Off:** When the computer is running on battery power without being connected to AC adapter.
4	**Power**	This shows the computer operating status. **On:** When the computer is operating. **Blinks:** When the computer is in Sleep mode.

Right View

▶ For 14/15.6 inch models

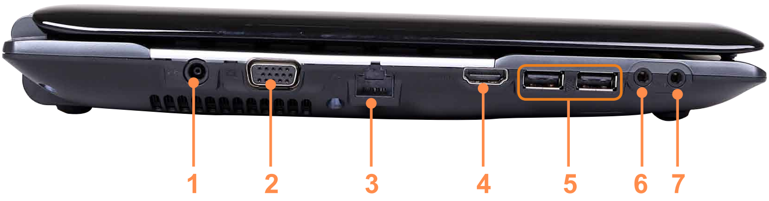


▶ For 17.3 inch models



1	**CD Drive(ODD) (Optional)**	Plays CD or DVD titles. Since an ODD(Optical Disk Drive) is optional, the installed drive depends on the computer model.
2	**USB 3.0 (Blue) Port or USB 2.0 (Black) Port (Optional)**	You can connect USB devices to the USB port such as a keyboard/mouse, digital camera, etc.
3	**Security Slot**	You can secure the computer by connecting a lock and cable to the Security Slot.

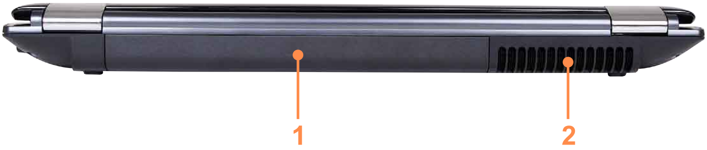
Left View



1	**DC Jack**	A jack to connect the AC adapter that supplies power to the computer.
2	**Monitor Port**	A port used to connect a monitor, TV or projector supporting a 15pin D-SUB interface.
3	**Wired LAN Port**	Connect the Ethernet cable to this port.
4	**Digital Video/Audio Port (HDMI) (Optional)**	You can connect an HDMI cable to this port. Using this port, you can enjoy digital video and audio on the TV.
5	**USB Port ⭢ or Chargeable USB Port ⭢ϟ (Optional)**	USB ports to which you can connect USB devices as well as a chargeable USB port are provided. Using a chargeable USB port, you can access or charge a USB device. The port can be distinguished by the figure (⭢ or ⭢ϟ) printed on the port of the product.
6	**Microphone Jack**	A jack used to connect the microphone.
7	**Headphone Jack**	A jack used to connect the headphones.

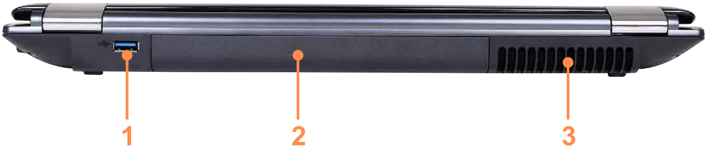
Back View

▶ For 14/15.6 inch models



1	**Battery**	This is a Lithium-Ion rechargeable battery that supplies power to the computer.
2	**Fan Vents**	The internal heat of the computer is emitted through these holes. ❗ If the vents are blocked the computer may overheat. Avoid blocking the vents as this may be dangerous.

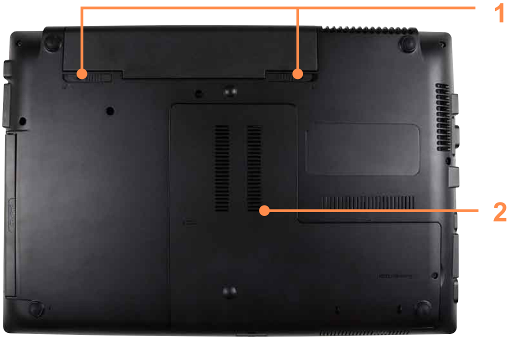
▶ For 17.3 inch models



1	**USB 3.0 (Blue) Port or USB 2.0 (Black) Port (Optional)**	You can connect USB devices to the USB port such as a keyboard/ mouse, digital camera, etc.
2	**Battery**	This is a Lithium-Ion rechargeable battery that supplies power to the computer.
3	**Fan Vents**	The internal heat of the computer is emitted through these holes. ❗ If the vents are blocked the computer may overheat. Avoid blocking the vents as this may be dangerous.

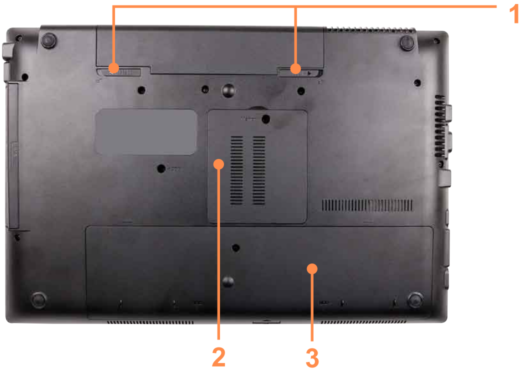
Bottom View

▶ For 14/15.6 inch models



1	**Battery Latches**	A latch used to remove or install the battery.
2	**Memory Compartment Cover/ Hard Disk Drive Compartment Cover**	The main memory and hard disk drive is installed inside the cover.

▶ For 17.3 inch models



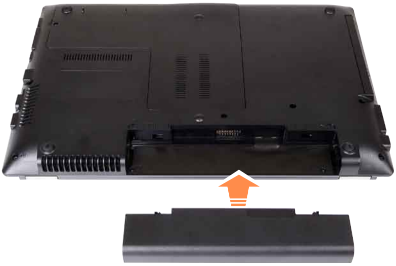
1	**Battery Latches**	A latch used to remove or install the battery.
2	**Memory Compartment Cover**	The main memory is installed inside the cover.
3	**Hard Disk Drive Compartment Cover**	The hard disk drive is installed inside the cover.

Turn on the computer

Attaching the Battery

1 Battery preparation.

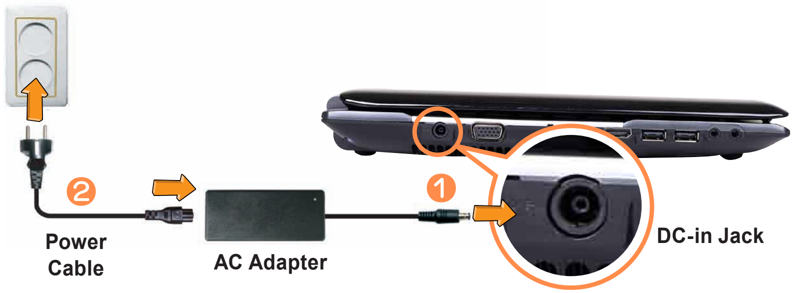
2 Attaching the Battery.



Connect the AC adapter

1 Connect the AC adapter.

2 Connect the power cable.



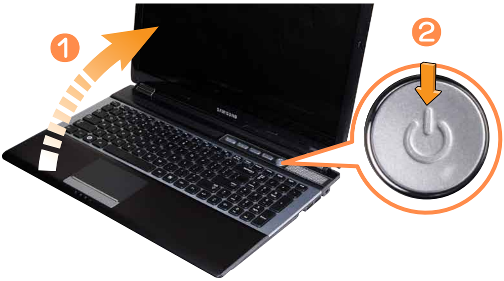
- Charge the battery fully when using the computer for the first time.
- When using the power cable, insert the power cable completely into the AC adapter.
- Some items may be replaced with similar products and the color of some items may differ from that in this document.

Turn on the computer

Charge the battery fully when using the computer for the first time.

1 Lift up the LCD panel.

2 Press the **Power button** to turn the computer on.



3 **Power button** LED is lit while the computer is turned on.

Press the **Fn**+ ▲☼ key to increase the LCD brightness.
You can only use this function after installing Windows XP/Windows Vista/Windows 7 and installing the **Easy Display Manager** program with the **system software media disk**.

Using Sleep Mode

You can use the Sleep mode after installing Windows XP/Windows Vista/Windows 7.

Sleep mode enables switching the computer to Standby mode in order to minimize power consumption and enables users to use the computer instantly by pressing any key on the mouse or keyboard.

Using Sleep Mode in Windows Vista/7

Click **Start** > ▶ > **Sleep**.

Using Stand by Mode in Windows XP

Click **Start** > **Turn Off Computer** > **Stand By**.

Chapter 2.

Using the computer

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Touchpad **58**

CD Drive (ODD, Optional) **59**

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Multi Card Slot (Optional) **61**

Adjusting the Volume **63**

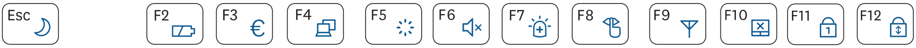
Keyboard

Shortcut key functions and procedures are discussed in the following sections.

- The keyboard image may differ from the actual keyboard.
- The keyboard may differ depending on your country. The following mainly describes the shortcut keys.
- You can only use the hot keys and the pre-determined shortcut keys (Windows key, application key, volume key, etc.) after installing Windows XP/Windows Vista/ Windows 7.
- Some model is not supplied System Software Media depending on your computer model.

Shortcut Keys

You can use the following functions by pressing the keys below with the **Fn** key.



Fn+	Name	Function
Esc	**REST (Sleep Mode)**	Pressing the key switches the computer to power-saving (Standby) mode. To use the computer in this state, press the Power button. You can use this button after installing Windows XP/Windows Vista/Windows 7.
F2	**Gauge**	Shows the remaining battery charge. You can only use this function after installing Windows XP/ Windows Vista/Windows 7 and installing the **Easy Display Manager** program with the **system software media disk**.
F3 €	**Euro**	Enters the Euro monetary unit symbol. This key may not be provided depending on the keyboard type.
F4	**CRT/LCD**	Switches the screen output to the LCD or external monitor when an external monitor (or TV) is connected to the computer. You can only use this function after installing Windows XP/ Windows Vista/Windows 7 and installing the **Easy Display Manager** program with the **system software media disk**.

Fn+	Name	Function
F5	**Backlit**	Turns the LCD backlight on or off. You can only use this function after installing Windows XP or Windows 7/Vista and installing the **Easy Display Manager** program with the **system software media disk**.
F6	**Mute**	Mutes or cancels mute. You can only use this function after installing Windows XP or Windows 7/Vista and installing the **Easy Display Manager** program with the **system software media disk**.
F7	**Samsung Support Center**	System diagnosis, recovery and Internet consultation program, Samsung Support Center, will be launched. (Optional) You can only use this function after installing Windows XP or Windows 7/Vista and installing the **Samsung Support Center** program with the **system software media disk**. (Optional)
F8	**Easy SpeedUp Manager**	You can select operation mode when you need maximum system performance or low-noise/low power consumption with one-click. You can only use this function after installing Windows XP/ Windows Vista/Windows 7 and installing the **Easy SpeedUp Manager** program with the **system software media disk**. ● **Silent**: Low-noise and low power consumption mode ● **Normal**: Normal Mode ● **Speed**: Maximum performance mode. The system operates in its maximum performance, and system resources are allocated to the currently active program with priority for maximum performance. ● **Speed Boot**: Quick booting mode. This mode enables quick booting when the booting process has slowed down because multiple programs have been installed. You can boot up the computer more quickly by setting the time to execute the SW in the Advanced menu. If you don’t want fan noise turning ON and OFF in the Silent mode, select the **Advanced** menu **> Fan Silent Mode > Low** in the BIOS Setup. The fan keeps turning ON and works in Low noise mode.

Fn+	Name	Function
F9	**Wireless network**	Turns on or off wireless network device in a model equipped with wireless network device. You can only use this function after installing Windows XP/ Windows Vista/Windows 7 and installing the **Easy Display Manager** program and the wireless LAN driver with the **system software media disk**.
F10	**Touchpad**	Turns the Touchpad function on or off. When using an external mouse only, you can turn the Touchpad off. You can only use this function after installing Windows XP or Windows 7/Vista and installing the **Easy Display Manager** program with the **system software media disk**.
F11	**Num Lock (Optional)**	Turns the numeric keyboard on or off. (For 14 inch models) For 15.6/17.3-inch models, once the Num Lock is on, the numeric keypad in the right side of the keyboard is enabled. You can only use this function after installing Windows XP or Windows 7/Vista and installing the **Easy Display Manager** program with the **system software media disk**.
F12	**Scroll Lock**	If you turn the Scroll Lock on, you can scroll the screen up or down without changing the cursor location in some applications. You can only use this function after installing Windows XP or Windows 7/Vista and installing the **Easy Display Manager** program with the **system software media disk**.

Screen Brightness Control

To adjust the LCD brightness press the **Fn** + ▲☼ key combination or the **Fn** + ☼▼ key combination.

The changed screen brightness is displayed at the center of the screen for a moment.

You can use the screen brightness control keys after installing Windows and Easy Display Manager.

Volume Control

To control the volume, press the **Fn** + 🔉 key combination or the **Fn** + 🔊 key combination.

You can mute the sound or cancel the mute function by clicking the **Fn** + F6 🔇 key combination.

You can use the volume and numeric keys after installingWindows XP/Windows Vista/ Windows 7.

Numeric Key (For 15.6/17.3 inch models)

Once the Num Lock is on, the Num Lock light is lit and the numeric keypad is enabled.

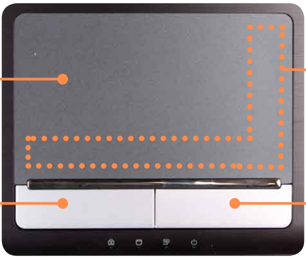
You can use the numeric keys after installing Windows XP/Windows Vista/Windows 7.

Touchpad

The touchpad provides the same function as a mouse and the left and right buttons of the touchpad plays the role of the left and right buttons of a mouse.

Before You Start!

- Use the Touchpad with your fingers. Using a sharp object may damage the Touchpad.
- If you touch the Touchpad or press the Touchpad buttons while booting up, the Windows boot time may be extended.
- The images used for the illustration are of a representative model, therefore the images may differ from the the actual product.



Touch Area

Used to move the cursor.

Touchpad Left Button

You can select or run a program using this button.

Scroll Area

This corresponds to the wheel of the mouse and can be moved up, down, left or right.

Touchpad Right Button

Plays the role of the right mouse button.

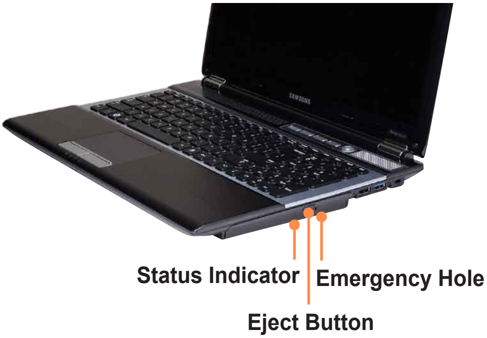
CD Drive (ODD, Optional)

An optical disk drive is optional and may differ depending on your computer model.
For detailed specifications, refer to the catalogue.

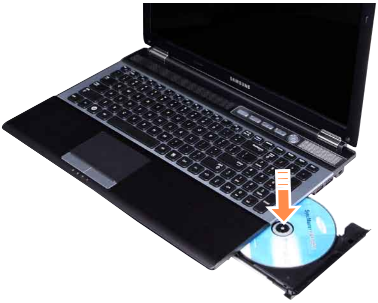
- Do not insert a cracked or scratched CD. Otherwise, the CD may break and damage the optical disk drive when the CD rotates at a high speed.
- When you clean a CD or DVD title, wipe with a soft cloth from inside to outside.
- Insert a Mini CD into the center of the CD drive.
- The images used for the illustration are of a representative model, therefore the images may differ from the the actual product.
- Using a CD that is not in the shape of a circle is not recommended.

Inserting and Ejecting a CD

1 Click the **Eject** button of the optical disk drive at the side of the computer.



2. When the CD tray pops out, insert a CD or DVD until it clicks.



3. Push the CD tray inward until it clicks. The CD drive status indicator is turned on.

- A CD drive's reading and writing speed may differ depending on the condition and type of the media.
- To eject a CD when the CD drive does not work or the computer is off, place the end of a paper clip ( ) into the Emergency Hole until the CD tray is ejected.

Multi Card Slot (Optional)

Using the multi card slot, you can read and write data to a SD, SDHC, MMC And SDXC cards.

You can use a card as a removable disk and conveniently exchange data with digital devices such as a digital camera, digital camcorder, MP3, etc.

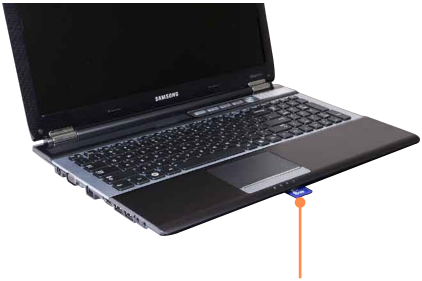
You can only use it after installing Windows XP/Windows Vista/Windows 7.

Before You Start!

- You have to additionally purchase a multi card with the necessary capacity depending on your requirements.
- You can use a multi card just like any data storage device. A copyright protection function is not supported.
- Since you can lose a card when moving the computer, keep the card separately.
- Before using the slot, remove the dummy card from the slot. (Only models supplied with a dummy card).
- Supported Cards : SD Card, SDHC card, MMC Card, SDXC Card
- The images used for the illustration are of a representative model, therefore the images may differ from the the actual product.

To Insert and Use a Memory Card

Insert the card into the multi card slot in the indicated direction.



Example) SD Card

Using a Mini SD snd RS-MMC

Since the above cards are too small, you cannot insert the cards into the slot directly.

Insert the card into the dedicated adapter (available from most electronic retailers) and then insert the adapter into the multi card slot.

However, depending on the adapter’s body material, some RS-MMC cards may not be recognized properly.

Samsung recommend that you check the card is recognized correctly prior to purchasing.

To remove a memory card

Take hold of the end of the card and remove the card.

To format a memory card

When using a memory card for the first time, you must format the card before using it.

Formatting a card deletes all data saved on the card. If the card includes data, backup the data before formatting it.

1 Click **Start** > **My computer.**

2 Right-click over a card drive with the touchpad and select **Format.**

3 Click **Start** to the formatting.

- To use a card to exchange data with a digital device such as a digital camera, formatting the data using the digital device is recommended.
- When you try to use a card, which is formatted in the computer, in another digital device, you may have to format the card again in the device.
- You cannot format, write or delete data from a SD, or SDHC card with a write protection tab when it is in the Lock position.
- Inserting and removing a memory card repeatedly may damage the memory card.

Adjusting the Volume

You can adjust the volume using the keyboard and the volume control program.

Adjusting the Volume using the Keyboard

Press the **Fn** + 🔈► key combination or **Fn** + ◄🔈 key combination to adjust the volume.

Press the **Fn** + F6 🔇 key combination to turn the volume on or off.

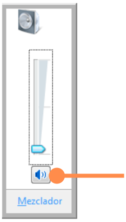
You can only use it after installing Windows XP/Windows Vista/ Windows 7.

Adjusting the Volume using the Volume Adjustment Program

You can only use it after installing Windows XP/Windows Vista/ Windows 7.

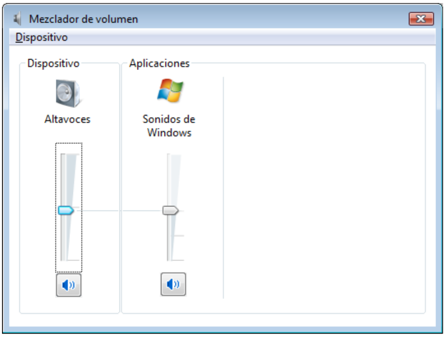
The following are the procedures to control the volume in Windows 7/Vista. For the Windows XP procedures, refer to the following as the procedures are similar.

Click the **Volume** icon 🔊 on the taskbar and slide the volume control bar to adjust the volume.



Mute

Alternatively, right-click over the **Volume** icon 🔊 and select **Open Volume Mixer** to adjust the volume.


Mezclador de volumen
Dispositivo
Dispositivo
Aplicaciones
Altavoces
Sonidos de Windows

Chapter 3.

Settings and Upgrade

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LCD Brightness Control

You can adjust the LCD brightness in 8 levels.

Before You Start!

The LCD brightness is the brightest (Level 8) when the computer is running on AC power, and it becomes dimmer when running on battery power.

Controlling the Brightness Using the Keyboard

You can use the screen brightness control keys after installing Windows and Easy Display Manager.

Adjust the LCD brightness by pressing the **Fn** +(▲☼) key or the **Fn** +(☼▼) key.
The LCD brightness can change up to 8 levels and the brightness increases by 1 level when pressing the **Fn** +(▲☼) key once.

LCD bad pixels principle of computer

Samsung observes the specifications regarding strict quality and reliability of LCD But in spite of that, it is inevitable that there might be a small number of bad pixels. A large number of bad pixels can cause problems in appearance, but a small number of pixels doesn't affect the computer performance.

Therefore Samsung observes and manages the following dot principles:

- Bright dot : 2 or less
- Black dot : 4 or less
- Combination of Bright and Dark : 4 or less

Instructions for Cleaning the LCD

Clean the LCD panel with a soft cloth lightly moistened with computer cleansing detergent moving in one direction.

Cleaning the LCD panel with excessive force can damage the LCD.

BIOS Setup

The BIOS Setup enables you to configure your computer hardware according to your needs.

Before You Start!

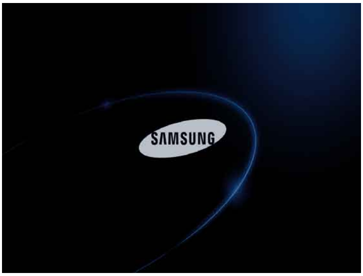
- Use the BIOS setup to define a boot password, change the booting priority, or add a new device.
  Since incorrect settings may cause your system to malfunction or crash, take care when configuring the BIOS.
- The functions of the BIOS setup are subject to change for product function enhancement purposes.

The BIOS Setup menus and items may differ depending on your computer model.

Entering the BIOS Setup

1 Turn the computer on.

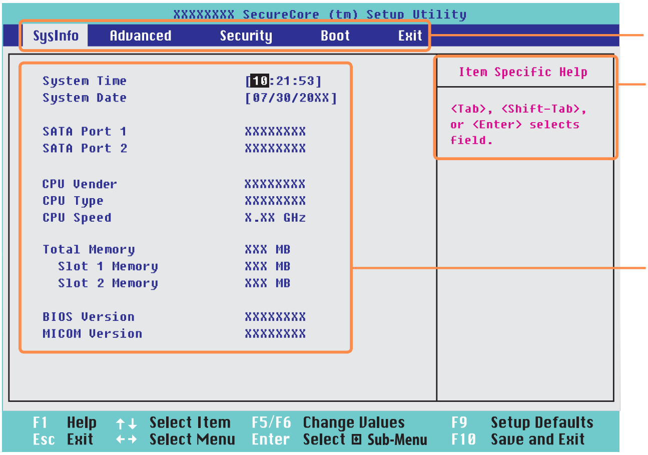
2 When the booting screen (SAMSUNG logo) appears, press the F2 key to enter the BIOS Setup.



The screen images in this document may differ from actual product.

3 After a moment, the BIOS setup screen appears.
The items in the BIOS setup may differ depending on the product.

The BIOS Setup Screen



```
                 XXXXXXXX SecureCore (tm) Setup Utility
 SysInfo   Advanced     Security     Boot      Exit

   System Time                [10:21:53]         Item Specific Help
   System Date                [07/30/20XX]
                                                <Tab>, <Shift-Tab>,
   SATA Port 1                XXXXXXXX          or <Enter> selects
   SATA Port 2                XXXXXXXX          field.

   CPU Vender                 XXXXXXXX
   CPU Type                   XXXXXXXX
   CPU Speed                  X.XX GHz

   Total Memory               XXX MB
     Slot 1 Memory            XXX MB
     Slot 2 Memory            XXX MB

   BIOS Version               XXXXXXXX
   MICOM Version              XXXXXXXX

 F1   Help  ↑↓ Select Item  F5/F6 Change Values      F9   Setup Defaults
 Esc  Exit  ←→ Select Menu  Enter Select ⊡ Sub-Menu  F10  Save and Exit
```

Setup Menu

Help

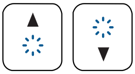
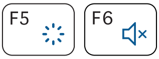
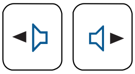
Help for the selected item appears automatically.

Setup Items

Setup Menu	Description
SysInfo	This is a description about the basic specifications of the computer.
Advanced	Using this menu, you can configure the major chipsets and additional functions.
Security	Used to configure security functions, including passwords.
Boot	This menu enables you to configure peripherals and booting related settings such as the boot priority.
Exit	Used to exit the Setup either saving the changes or not.

System Setup Keys

In the Setup, you have to use the keyboard.

F1		Press to view the Setup Help.
Up & Down Keys		Press to move up and down.
F5/F6		Press to change the item value.
F9		Press to load the default Setup settings.
ESC		Press to return to a higher level menu or to move to the Exit menu.
Left & Right Keys		Press to move to another menu.
Enter		Press to select an item or to enter a sub menu.
F10		Press to save the changes and exit Setup.

The keyboard image may differ from the actual keyboard.

Setting a Boot Password

When setting a password, you have to enter a password to use the computer or enter the BIOS Setup.

By configuring a password, you can restrict system access to authorized users only and protect data and files saved on the computer.

Before You Start!

- Do not lose or forget your password.
- If you have forgotten your password, contact a Samsung service center. In this case, a service fee will be charged.

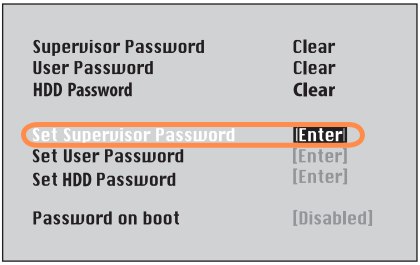
Setting a Supervisor Password

A Supervisor Password is required to turn the computer on or to start the System Setup.

When setting a Supervisor Password, users other than a supervisor cannot use the computer.

1 Select the **Security** menu in the BIOS Setup.

2 In the **Set Supervisor Password** item, press <**Enter**>.



```
Supervisor Password          Clear
User Password                Clear
HDD Password                 Clear

Set Supervisor Password      [Enter]
Set User Password            [Enter]
Set HDD Password             [Enter]

Password on boot             [Disabled]
```

3 Enter a password, press <**Enter**>, re-enter the password for confirmation, and press <**Enter**> again. The password can be up to 8 alphanumeric characters. Special characters are not allowed.

4 When a message confirming the password configuration appears in the [**Setup Notice**] window, press <**Enter**>. The supervisor password has been set. The supervisor password is required to turn the computer on or to enter the BIOS Setup.

Setting a User Password

Users can start the system with a user password, but cannot enter the System Setup. By doing this, you can prevent other users from entering Setup.

Before configuring a user password, a supervisor password must have been configured. Deactivating the supervisor password also deactivates the user password.

In the **Set User Password** item, press <**Enter**> and complete the procedures from Step 3 of Setting a Supervisor Password.

Setting up a Hard Disk Drive Password (Optional)

If you set a password for a hard disk drive, it cannot be accessed from another computer.

Press Enter in the **Set HDD Password** item and define a password as described in Step 3 of the Setting up the Supervisor Password.

> The hard disk drive password setting function is not provided for some models.

> **Changing the hard disk drive password**
>
> For security purposes, you can only change a hard disk drive password after restarting the computer by pressing the computer **Power** button.
>
> If you cannot change the hard disk drive password or the **HDD Password Frozen** message appears when entering the BIOS Setup and then selecting **Security > HDD Password**, press the Power button to turn the computer on again.

Setting Up a Boot Password

To setup a boot password, the administrator password (Set Supervisor Password) should be set in advance.

Set the **Password on boot** item to Enabled. Once a boot password is set, you have to enter a password to boot up the computer.

Deactivating the Password

1. Press <**Enter**> on the password to be deactivated. For example, to deactivate a supervisor password in the **Set Supervisor Password** item, press <**Enter**>.

2. In the **Enter Current Password** item, enter the currently configured password and press <**Enter**>.

3. Leave the **Enter New Password** item field empty, and press <**Enter**>.

4. Leave the **Confirm New Password** field empty, and press <**Enter**>.

5. In the [**Setup Notice**] window, press <**Enter**>.

   The password is deactivated.

Changing the Boot Priority

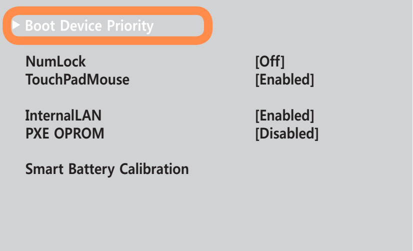
The default boot priority of your computer is the CD-ROM first, then a removable device and then the hard disk drive in this order.

By default, the highest boot priority device is set to the CD-ROM/DVD drive. As an example, the procedures to change the highest boot priority device to the hard disk drive are described below.

The screen images and terms may differ from actual product depending on the computer model and driver version.

1 Select the **Boot** menu in the BIOS Setup.

2 Press <**Enter**> on the **Boot Device Priority** item.



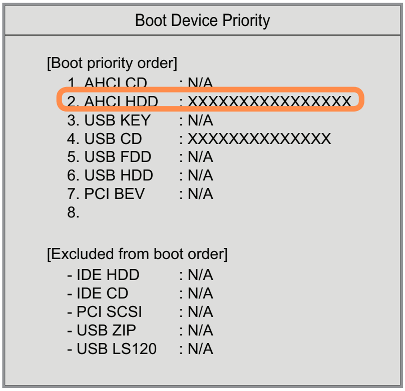
```
▶ Boot Device Priority

NumLock                          [Off]
TouchPadMouse                    [Enabled]

InternalLAN                      [Enabled]
PXE OPROM                        [Disabled]

Smart Battery Calibration
```

3 Press the down key (↓) to move to the AHCI HDD item and press the **F6** key to move up to the top item.



```
                Boot Device Priority

[Boot priority order]
   1. AHCI CD      : N/A
   2. AHCI HDD     : XXXXXXXXXXXXXXXX
   3. USB KEY      : N/A
   4. USB CD       : XXXXXXXXXXXXXX
   5. USB FDD      : N/A
   6. USB HDD      : N/A
   7. PCI BEV      : N/A
   8.

[Excluded from boot order]
   - IDE HDD       : N/A
   - IDE CD        : N/A
   - PCI SCSI      : N/A
   - USB ZIP       : N/A
   - USB LS120     : N/A
```

4 Press the **F10** key to save the settings and exit Setup. The highest boot priority device is now set to the Hard Drive.

Upgrading Memory

One or more memory modules are installed on the computer.

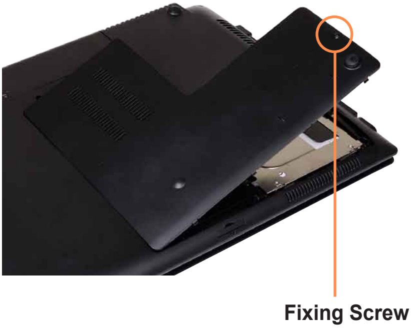
There are 2 memory slots and users can replace the installed memory or add new memory.

Before You Start!

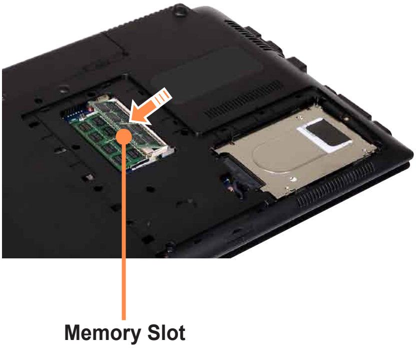
- Replace new memory only after shutting the computer down completely.
  Do not replace memory when the computer is in Sleep mode.
- Disconnect main power plug and remove the battery before continuing.
- To utilize the dual channel feature, using memory modules with the same specifications (of the same capacity and from the same manufacturer) is recommended.
- Only use the same type of memory as specified in the Product Specification.
- The images used for the illustration are of a representative model, therefore the images may differ from the the actual product.

Adding or Replacing Memory Modules

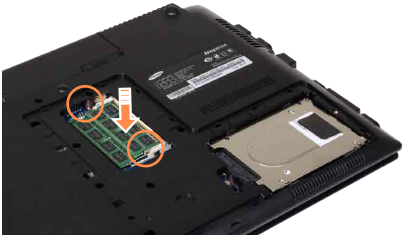
1. Remove the screw on the memory compartment cover at the bottom of the computer using a screw driver.



2. Insert a new memory module into the memory slot at an angle of approximately 30 degrees aligning it to the angle of the memory slot.



3 Push the memory module down so that it is completely fixed. If the memory does not fit easily, push the memory module down while pulling the memory module latches outward.

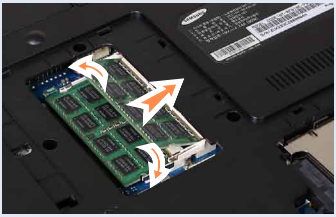


4 Close the memory compartment cover and fasten the screw.

Removing a memory module

Pull the memory module latches outward.
The memory module will pop up.

Remove the memory module out at an angle of 30 degrees.



Adding a Hard Drive (optional, 17.3” models only)

This computer contains either a single hard drive or dual hard drives (optional).

If your computer has a single hard drive, you can install an additional hard drive in the secondary hard drive bay.

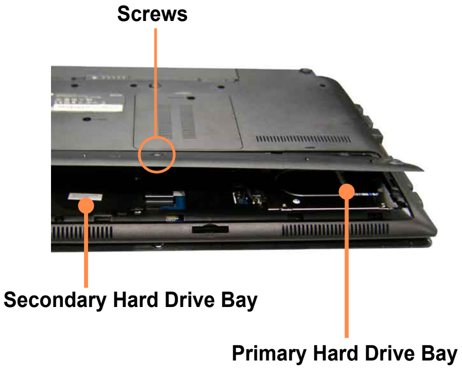
Before You Start!

- The images used in the instructions below are for illustration purposes only and may differ from the actual product.
- Supports 9.5mmH 2.5” SATA2 notebook hard drives only (sold separately).
- Caution: Hard drive cases have sharp edges that can cause injury.
- When adding another hard drive, use the secondary hard drive case, connector, and screws that are provided with this product.

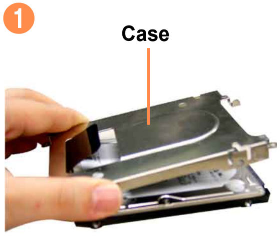
Adding a Hard Drive

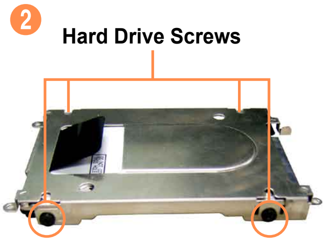
1 Shut down the computer completely and unplug the power adapter from the main unit.

2 Remove the hard drive bay cover screw and separate the cover.

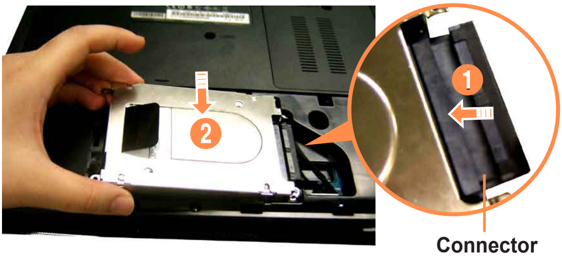


3 ① Insert the secondary hard drive into the case so that all the holes are lined up and then ② fasten the hard drive screws to secure the hard drive to the case.

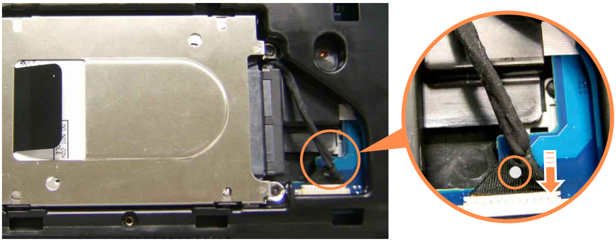




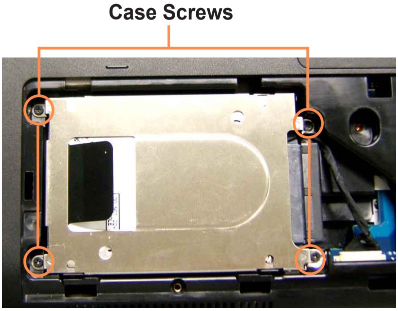
4 Attach the connector to the new drive and insert the drive into the secondary hard drive bay.



5 If a connector remains unconnected, insert the connector, with the white dot facing up, into the socket.



6 Fasten the case screws.



7 Attach the hard drive bay cover and fasten the screws.

Once you have installed a secondary hard drive, format it in accordance with the instructions in the user manual of the hard drive before use.

Battery

Please refer to the following instructions when running the computer on battery power without connecting the AC power.

A Lithium-Ion smart battery is supplied with this computer.

Before You Start!

- Carefully read and follow the precautions printed on the battery before using the battery.
- Before using your computer for the first time after purchasing it, charge the battery completely.

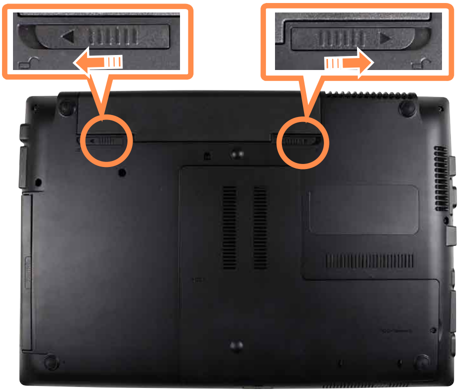
Precautions

- Use only chargers specified in the User Manual.
- Never heat the battery pack, put it near or in a fire or use at a temperature higher than 60°C, as this may cause fire.
- Never cause a short circuit between the battery pack terminals or disassemble the battery pack.
- Carefully read and follow the precautions printed on the battery and the safety instructions in the User Manual before using the battery.
- Please refer to the system operation environment of this manual and operate and store the battery at room temperature.

Installing/Removing the Battery

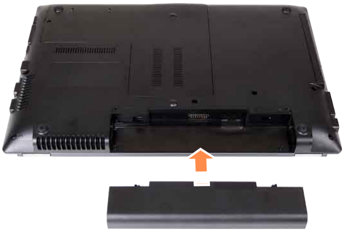
1 Shutdown the system, close the LCD panel and place the computer upside down on a flat surface.

2 Pull the two battery latches **outwards** 🔓, then remove the battery.



3 To install the battery again, slide the battery into the system.

The battery latches move inwards and fix the battery automatically.



Check if the battery latch has been moved inwards.

Charging the Battery

1 Attach the battery and connect the AC adapter to the DC-in jack of the computer. The battery will then start charging.

2 When charging is complete, the Charge LED turns green.

Status	Charge LED	
Charging	🔴 🟠	**Red** or **Orange**
Charging complete	🟢 🔵	**Green** or **Blue**
AC adapter not connected	○	**Off**

Measuring the Remaining Battery Charge

You can view the battery charge status by completing the following procedures.

To use the shortcut key to view

You can only use this function after installing Windows XP/Windows Vista/Windows 7 and installing the **Easy Display Manager** program with the **system software media disk**. (Only for Windows XP/Windows Vista/Windows 7)

Press the **Fn** + F2 keys on the keyboard.

The remaining battery charge (%) will displayed for a moment.

Battery Usage Time Information

A battery is an expendable supply, so when using it over a long time, the capacity/battery life is shortened. If the battery life is reduced to under half of its initial time, we recommend purchasing a new battery.

For long periods of not using the battery, keep the battery after discharging it. This extends the battery life time.

Extending the Battery Usage Time

Decreasing the LCD Brightness

Press the **Fn** + ☼▼ keys on the keyboard to decrease the LCD brightness to extend the battery usage time.

You can only use this function after installing Windows XP/ Windows Vista/Windows 7 Vista and installing the **Easy Display Manager** program with the **system software media disk**.
(Only for Windows XP/Windows Vista/Windows 7)

Using the Battery Calibration Function

When charging/discharging the battery repeatedly for a short time only, the battery usage time may be reduced by the difference between the actual battery charge and the remaining charge display.

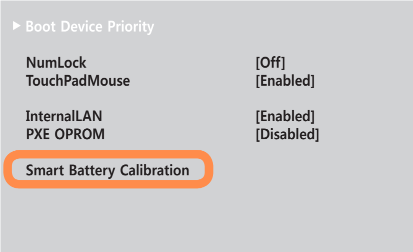
In this case, the actual battery charge and the remaining charge display will be the same by discharging the battery completely using the Battery Calibration function, and then recharging it again.

> The screen images and terms may differ from actual product depending on the computer model and driver version.

1 Disconnect the AC power adapter after turning off the computer.

2 Restart your computer and press the **F2** button when the Samsung logo appears, to start the BIOS Setup.

3 Move to the **Boot** > **Smart Battery Calibration** item using the direction keys and press <**Enter**>.



```
▸ Boot Device Priority

NumLock                          [Off]
TouchPadMouse                    [Enabled]

InternalLAN                      [Enabled]
PXE OPROM                        [Disabled]

Smart Battery Calibration
```

4 Highlight **Yes** in the **Battery Calibration Confirmation** window and press <**Enter**>.

The Battery Calibration function is activated and the battery is forcefully discharged. To stop the operation, press the (**Esc**) button.

This operation requires 3~5 hours depending on the battery capacity and the remaining battery charge.

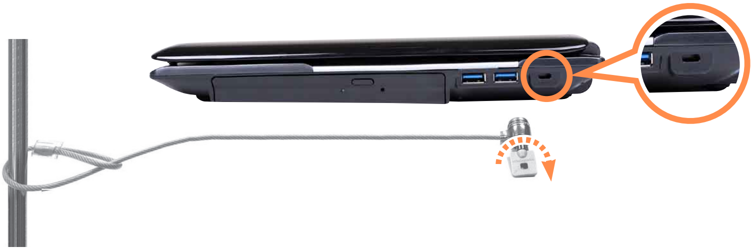
Using the Security Slot

You can secure the computer by connecting a lock and cable to the Security Slot.

To use this feature, you have to purchase the lock and cable additionally.

To use the lock and cable, refer to the product manual.

Tie the lock and cable to a fixed object and install the other end of the cable to the security slot.



Chapter 4.

Appendix

Product Specifications 84

Product Specifications

The system specifications may differ depending on the derived models. For detailed system specifications, refer to the product catalogue.

NP-RF408/RF508/RF708/RF409/RF509/RF709/RC528/RC728

CPU (Optional)	Intel i3/i5/i7 (Core) Processor
Main Memory	Memory type: DDR3 SODIMM
Main Chipset (Optional)	Intel HM55 Intel HM65
Hard Disk Drive (Optional)	9.5mmH SATA HDD
Graphics (Optional)	Intel HD Graphics (Internal) Nvidia GeForce GT 330M (External) Nvidia GeForce GT 420M (External) Nvidia GeForce GT 525M (Optimus) Nvidia GeForce GT 540M (Optimus)
Operating Environment	Temperature : -5~40°C for storage, 10~32°C when operating Humidity : 5~90% for storage, 20~80% when operating
AC/DC Rating (Optional)	Input) 100 - 240VAC , 50/60Hz Output) 19VDC 3.16A / 19VDC 4.74A / 19VDC 6.32A
PC Rating (Optional)	19VDC 3.16A (60W) / 19VDC 4.74A (90W) / 19VDC 6.32A (120W)

- Optional components may not be provided or different components may be provided depending on the computer model.
- The system specifications are subject to change without notice.
- The amount of memory that Windows can use may be smaller than the actual amount of memory available.

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